

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

CERENCE OPERATING COMPANY,

Plaintiffs,

v.

SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.,

Defendants.

Case No. 2:23-cv-00482-JRG-RSP

JURY TRIAL DEMANDED

**PLAINTIFF CERENCE OPERATING COMPANY'S
REPLY CLAIM CONSTRUCTION BRIEF**

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TABLE OF EXHIBITS AND ABBREVIATIONS

Ex. *	Description	Abbreviation
1	U.S. Patent No. 7,395,078	'078 patent
2	U.S. Patent No. 8,081,993	'993 patent
3	U.S. Patent No. 11,393,461	'461 patent
4	U.S. Patent No. 11,087,750	'750 patent
5	U.S. Patent No. 9,026,428	'428 patent
6	Declaration of Dr. Eric Koskinen Regarding Claim Construction (dated December 6, 2024)	Koskinen Decl.
7	Transcript of December 23, 2024 Deposition of Dr. Eric Koskinen	Koskinen Depo.
8	Declaration of Henry H. Houh, Ph.D. In Support of Samsung's Proposed Claim Constructions (dated December 13, 2024)	Houh Decl.
9	Transcript of December 23, 2024 Deposition of Dr. Henry Houh	Houh Depo.
10	Joint Claim Construction Statement (dated December 6, 2024) (Dkt. 75)	JCCS

* All exhibits attached to the earlier-filed declaration of James S. Tsuei.

I. DISPUTED TERMS FOR '078 and '993 PATENTS

A. “non-text representation of the [received] utterance” ('078 patent, claims 1, 9, 12) / “non-text representation of [an / the] utterance” ('993 patent, claims 1, 7, 10, 16)

Samsung argues that its proposal for limiting “non-text representation” to specifically “a string of symbols” corresponding to “phonemes, diphones, and triphones” should be adopted because Cerence allegedly advanced a “lexicographical” definition and disclaimed claim scope in its response to Samsung’s IPR against the '078 patent. It also argues that the “non-text representation” of the claims must be “capable of sent over SMS” because it is the “entire purpose” of the “present invention” of the patents. Both arguments are meritless. Samsung relies on cherry-picked fragments from Cerence’s POPR and omits contrary context from the intrinsic record.

First, Samsung’s disclaimer argument is based on cherry-picked sentences from Cerence’s POPR to Samsung’s IPR against the '078 patent. *See* Resp. at 4-7. The basic premise of Samsung’s disclaimer argument is that Cerence supposedly distinguished Dolan’s pulse-code modulated audio data to argue that Dolan’s audio data is not a “non-text representation.” *Id.* This is false. *See* Dkt. 91-2 (Cerence’s '078 POPR highlighted by Samsung), at 7-8. In reality, Cerence argued that Dolan’s teaching of transmitting solely audio data over SMS *did not establish they were included in a “text message,” not that the audio data itself was not a “non-text representation.”* *See id.* This is plain from the parts of Cerence’s POPR that Samsung did not identify, which make clear Cerence was distinguishing Dolan as not disclosing the inclusion of the mapped non-text representation *in a text message*:

This is where Petitioners’ mapping to the claims fails. While it is true that existing SMS messages are used to deliver text messages (Ex. 1005 at 1:18–19), the “enhanced” audio messages of Dolan are quite different. There is no field in Dolan’s Figure 4 that contains text or that could contain text. Accordingly, while Dolan implements these coded audio messages by making enhancements to the SMS system, the resulting coded audio messages are not “text messages” under the plain meaning of that term as understood by those skilled in the art.

Rather, Dolan’s “coded audio” is digital, compressed multi-bit pulse code modulated (PCM) audio.

...

A field defined to contain such multi-bit PCM audio cannot carry a “text message” or be the body of a “text message.”

There are embodiments of the ’078 patent that utilize SMS text messages, and certain dependent claims require that “the text message is an SMS message.” Ex. 1001 at 9:25, 10:27. But, it does not follow that all SMS messages are necessarily “text messages,” let alone that a modification to SMS messages to send coded audio instead of text—as is taught in Dolan—falls within the plain meaning of “text message.”

The teachings of the ’078 patent are entirely consistent with the plain meaning of a “text message” as a type of communication that contains or at the very least is capable of containing text. The “non-text representation” of the preferred embodiments of the ’078 patent is very different from the coded audio of Dolan. While it is “non-text,” it is “a string of symbols representing sounds of the utterance,” each symbol corresponding to sounds such as “phonemes, diphones, and triphones.” Ex. 1001 at 2:49–53. **Moreover, features of the preferred embodiments depend on the ability to send text “characters” within the text message. For example, the feature of choosing a “voice” to replay the message “is implemented by adding an additional string of characters representing ‘voice’ parameters to the non-text representation of the utterance.” Ex. 1001 at 7:8–10. These strings of symbols and characters are suited to be transmitted in the body of a “text message,” as taught and claimed in the ’078 patent, not in a coded audio message as taught by Dolan.**

Dkt. 91-2, at 7-8 (emphasis above by Cerence). Cerence did not make “statements of disclaimer that define the ‘non-text representation’ terms” (Resp. at 5-6). It was rebutting Samsung’s argument that the field in an SMS message coded to carry audio did not make it a “text message.”

Since Cerence plainly did not disclaim any scope for the “non-text representation” term, Samsung’s discussion about the patents’ vocoder embodiments (Resp. at 6) as being similar to Dolan’s vocoder disclosures misses the point. Cerence did not argue Dolan’s vocoder-generated audio was not a “non-text representation,” and Samsung’s suggestion otherwise is dishonest. Likewise, Samsung’s argument that Cerence’s claim differentiation arguments (*see, e.g.,* claims 4-6 of the ’078 patent) must give way to Cerence’s alleged disclaimer in IPR is similarly misplaced and based on a false characterization of Cerence’s IPR arguments.

Second, Samsung argues that the “non-text representation” terms must be construed to be limited to being “capable of sent over SMS.” To support its position, Samsung points out that the title of the patents and the specifications contain the term “short message service” and “SMS” multiple times. It says that the number of times the patents mention “SMS” in the context of embodiments amounts to “clear, repeated, and consistent statements” that support its requested narrowing construction. Resp. at 9-10 (citing *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1203 (Fed. Cir. 2013)).

However, the patents here do not repeatedly and consistently distinguish the invention *from a particular technique* as in *SkinMedica* (which was the context in which the Federal Circuit used the “clear, repeated, and consistent statements” language to establish disclaimer). To the contrary, the ’078 and ’993 patents describe the use of SMS channels as an optional aspect of *preferred embodiments*, which is made clear from the specification’s repeated statements that its invention being usable over any non-SMS channel and dependent claims. *See* ’078 patent, at 8:29-34 (“While the SMS network is presented in the above example, *any network over which one might send text, data and/or media other than voice could be used*. As an example one would also use an MMS (Multi-Media Service) messaging channel.”), 6:58-64, 8:20-24; & ’078 patent, cl. 8 (“The method of claim 1, wherein the wireless messaging channel is an SMS channel and the text message is an SMS message.”).

Samsung’s citation to “present invention” language from the provisional application of the ’078 and ’993 patents only undermines its argument. The “present invention” language quoted by Samsung does not appear in the specifications of the ’078 and ’993 patents, which means that the drafters *removed* that “present invention” language before they filed the actual specifications of the ’078 and ’993 patents. This means that the provisional application language here is not “clear

and unmistakable” basis for finding disclaimer. Moreover, the phrase “present invention” is not a magic incantation requiring a finding of disclaimer. Using “present invention” does not “amount to a disavowal where the specification d[oes] not uniformly require the limiting feature.” *Campbell Soup Co. v. Gamon Plus, Inc.*, 2021 WL 3671366, at *5 (Fed. Cir. Aug. 19, 2021). As explained above, the specification makes clear that the invention need not be used with a SMS channel but with *any* network over which one might send non-voice data.

II. DISPUTED TERMS FOR '461 and '750 PATENTS

A. “automatic speech recognition [(ASR)]” ('461 patent, claims 14, 15) / “automatic speech recognition [(ASR)]” ('750 patent, claims 1, 6, 8, 14, 15, 19)” ('461 patent, claim 2)

The dispute is now limited to whether ASR “determines” whether a voice trigger is present in an acoustic input as Cerence proposes or “recognizes” at least one of the words spoken as Samsung proposes. The Court should adopt Cerence’s proposal. First, the claims distinguish between using ASR to determine recognizing whether words were spoken and recognizing those words. For example, claim 1 of the '750 Patent (1) *performing automatic speech recognition (ASR)*, while in the lower power mode, (2) *to recognize at least one word or phrase in the acoustic input*. If ASR required the recognition of at least one word (as opposed to merely determining if words were spoken), then second clause is repetitive and unnecessary. Moreover, the specification is clear that “limited vocabulary ASR” only need detect whether a voice trigger was “uttered” or spoken” and it is the “more comprehensive ASR” that “*recognize[s]* other words present in the acoustic input, or ... received subsequent to detecting the explicit voice trigger.” '461 patent, at 18:62-19:2. Indeed, most of the dictionaries cited by Samsung define ASR as “recogniz[ing]” “human *voice commands*” and “*speech signal[s]*” as opposed to recognizing *words*. Resp. at 13.

Samsung relies heavily on the embodiment described in Fig. 7B to claim that voice activity detection stage 710 “determine[s] whether there is speech in the acoustic input” and ASR occurs

at the 720 “speech processing stage.” Resp. at 14-15. Yet, Samsung ignores the Figure 9 embodiment in which “Automatic Speech Recognition Component 930” (also referred to as ASR component 930) “may transmit recognized acoustic input” to “NLP [Natural Language Processing] component 940 “to evaluate whether the acoustic input includes a voice command.” ’461 Patent at 38:4-40. In other words, as described in the Figure 9 embodiment ASR component 930 “determin[es] whether one or more words are present in an acoustic input containing speech” as Cerence proposes.

B. “low power mode” (’461 patent, claim 1 preamble) / “low power mode” (’750 patent, claims 14, 16-19); “lower power mode” (’750 patent, claims 1, 12, 14, 19); “idle mode” (’461 patent, claims 1, 2, 18)

1. Samsung’s Proposal Is Unsupported By Lexicography

Samsung’s argument that its construction—requiring “low power mode” to be defined by what is “conventionally require[d]—“follows the lexicographical definition provided in the common specification” is without any basis in fact. Samsung clings to the statement that “[t]he phrase ‘refers to’ signals lexicography,” Resp. at 16-17, ignoring the fact that the patents use the phrase “refers *generally* to” not “*refers* to” in the portion of the specification containing the purported definition. ’461 Patent at 4:61-65. The use of “generally” shows the opposite of an intent limit the scope of the claims but simply use of a “common meaning.” Moreover, none of the cases cited Samsung stand for the proposition that use of “refers to,” alone, as here, automatically calls for the application of lexicography. *Seagen Inc. v. Daiichi Sankyo Co.*, No. 2:20-CV-00337-JRG, 2021 WL 4168660, at *16 (E.D. Tex. Sept. 14, 2021) (“the specification additionally uses quotation marks”); *Parkervision, Inc. v. Vidal*, 88 F.4th 969, 976 (Fed. Cir. 2023) (the use of the phrase “as used herein” as well the full text of two sentence “confirm[ed] the definitional intent.”) *Id.* at 976.

In any event, the test for the application of lexicography is not the use of “form phrases or magic words” but “clear intent to define a term.” *MasterObjects, Inc. v. Meta Platforms, Inc.*, No. 2023-1097, 2024 WL 630330, at *7 (Fed. Cir. Feb. 15, 2024). Here, no such intent is present. “Samsung does not dispute that the alleged invention involves using voice commands to exit “low power mode.”” Dkt. No. 91 at 18. Given this, Samsung’s contention that the claims defined “low power mode” based on “conventionally requir[ed] ... manual wake-up actions” is non-sensical. Essentially, Samsung contends that the inventors intended, and a POSITA would understand, that the claims could only be shown to infringe by comparing the accused device to the prior art and showing that absent the invention it would operate in the same manner as the prior art. Such a construction is meaningless and will not aid the jury.

2. “Low Power Mode” Is Not Indefinite In The Absence of Samsung’s Construction

Samsung’s alternative argument that unless infringement of the “low power mode” is determined by “conventionally requir[ed] ... manual wake-up actions” the term is indefinite is equally meritless. As an initial matter, multiple courts have construed “low power mode” based on similar technologies and had no problems understanding the breadth of the terms and issuing constructions similar to that proposed by Cerence. *TQ Delta, LLC v. Comcast Cable Commc'ns, LLC*, No. 1:15-CV-00611-RGA, 2016 WL 7013481, at *6 (D. Del. Nov. 30, 2016) (construing “low power mode” as “state of operation in which power is consumed, but the amount of power consumed is less than when operating in a state with full data transmission capabilities”); *ASUS Computer Int’l v. Round Rock Rsch., LLC*, No. 12-CV-02099-JST, 2013 WL 4081698, at *5 (N.D. Cal. Aug. 9, 2013) (“The patent specification itself explains that the “low power mode” corresponds to a mode in which the “data throughput” of the memory device is reduced”); *CyboEnergy, Inc. v. Altenergy Power Sys. USA, Inc.*, No. 6:22-CV-01136-KC, 2023 WL 9111626,

at *10 (W.D. Tex. Dec. 20, 2023) (“The Court is persuaded that adding an express construction of “low power mode” would be redundant of the plain claim language that already requires two distinct power modes.”).

Indeed, the Mozer prior art reference cited by Samsung only confirms Cerence’s construction is correct. As Samsung notes Mozer “explains that a ‘low power mode’ may be a ‘standby mode.’” Resp. at 17. Mozer teaches that this standby mode is one that uses less components than an “active mode” in other words is an example of a mode or state entered to conserve power”:

Standby is different from an active mode where the device may be fully powered.

For example, in standby mode the screen light would be turned off and no functions would be enabled beyond the microphone preamp circuitry and a lightweight processor (e.g. lower clock cycle implementation, etc.). Although the recognize remains on, all other functions are powered down to minimize power consumption.

These recognition modes and stages may automatically be determined to save power.

Dkt. 91-6, ¶[0060] (emphasis added).

Samsung’s contention that a POSITA would not know the bounds of what a low power mode without its construction because he or she would not know what components are on or off or how much power is conserved should be rejected. Nothing about the claims places any limitations on the amount of components that need to be turned on or off. As explained in the Opening Brief, the specification discusses at length what is meant by a “low power mode” in the context of the invention. *See* ’461 patent, at 1:39-40, 4:59-63, at 5:9-12. Moreover, Samsung’s proposed addition of “conventionally requires one or manual wake-up actions to exit (e.g., to activate the mobile device” does not teach the components required or amount of power either. This indicates that Samsung does not actually believe that a POSITA requires such teaching to understand the bounds of the term.

3. “Low Power Mode” In the Preamble of the ‘461 Patent Is Not Limiting

Samsung responds to Cerence’s arguments that “low power mode” in the preamble of Claim 1 should not be limiting by asserting, for the first time, that “the preamble of claim 1 is limiting.” Samsung never before identified the entire preamble or any other term other than “low power mode” as needing construction. *See* Dkt. No. 75-2, Joint Claim Construction Statement. For this reason alone, Samsung’s argument should be rejected.

Nonetheless, Cerence does not contest that “mobile device” as used in the preamble is limiting—as it supplies the antecedent basis for other claim limitations. “Low power mode,” as used in the preamble is not for the reasons described in the opening brief. Noteworthy, the first limitation of claim 1 of the ‘461 patent following the preamble is: “receiving acoustic input from the environment of the mobile device while the mobile device is operating in *idle mode*.” The parties have agreed that “idle mode” should have the same construction of “low power mode.” This further indicates that “low power mode” as used in the preamble does not give life, meaning, or vitality to the claim and should not held limiting.

C. “active mode” (‘461 patent, claim 2)

Samsung’s argument that “active mode” is supported by lexicography based on a stray use of “i.e.” in the specification should be rejected. First, Samsung does not address that claim 2 of the ‘461 Patent fully informs a POSITA as to the reasonable scope of the term: “[t]he method of claim 1, further comprising transitioning the mobile device from the idle mode to an active mode in response to detecting that the acoustic input includes a voice command.” Second, Samsung fails to note that in other portions of the specification “e.g.” is used to describe active mode as woken up—which is a term noting something which is exemplary only. *See* ‘461 Patent at 35:65-36:5. (“In response, voice response system 850 may transition the mobile device from the low power

mode to an active mode (*e.g.* the voice response system may incrementally wake-up the mobile device as appropriate, or fully activate the mobile device).”); *see also* Dkt. 83-10 at 13:21-14:10. Samsung provides no reason that this simple two-word phrase should be construed.

D. “higher power mode” (’750 patent, claims 1, 14, 19)

Samsung admits that “[h]igher power mode’ does not appear in the specification.” Dkt 91. at 26. Nonetheless, Samsung urges the Court adopt the same construction it proposes for “active mode.” This argument should be rejected. First, as noted above, Samsung’s proposed construction for “active mode” is incorrect and would not be appropriate for “higher power mode” for the same reasons. Moreover, the claims themselves provide the scope of the terms—that the higher power mode uses more power than the low power mode. See ’750 Patent at Claim 1 (“selecting whether to remain in the lower power mode or to transition to a higher power mode”), Claim 14 (same), Claim 19 (same). The addition of “has been woken up” as a limitation on the scope of the claims is unhelpful and improper.

III. DISPUTED TERM FOR ’428 PATENT

A. “sending the first sequence portion to an application” (’428 patent, claim 1)

Samsung does not dispute that this phrase is made of ordinary English words which together have an easily understandable plain meaning. Samsung instead argues that its proposed construction should be adopted because it includes what it describes as the “‘commit’ aspect” or “‘commit’ feature” of the specification’s discussion of preferred embodiments. *See Rep.* at 27-29. In its brief, Samsung describes the “auto-commit feature” by pointing to Figures 4E and 4F:

As shown in Figure 4F, “AB” has been sent to the application, and the candidate list no longer includes those characters, leaving only CDEFG or CDEFO as potential candidates. Those candidates cannot be used by a user to edit or replace the “AB,” as “AB” was already committed and sent to the application. That “AB” can no longer be edited within the method/system for data input after it is sent to the application is fundamental to achieving the purpose of the alleged invention.

Resp. at 28-29 (internal citations omitted). Samsung’s position is that the “auto-commit” aspect of the preferred embodiments is central to the “purpose of the alleged invention” such that the “sending” phrase here must be narrowly construed. This fails.

First, Samsung identifies no basis in the record to suggest that the patentee intended to disclaim or limit the “sending” phrase beyond its ordinary meaning. Its attorney-argument characterization of the “auto-commit” aspect of a preferred embodiment as “fundamental to the achieving the purpose of the alleged invention” is both conclusory and unsupported by any evidence. Second, the specification’s discussion about input ultimately sent to an application not being further editable is a function not of the invention’s *sending* to an application, but as a part of the separate and predicate step of *removing* a candidate sequence from the buffer. *See* ’428 patent, at 8:50-64 (“As a result, the recognition engine removes the recognized sequence 442 from the buffer, thereby precluding the recognized sequence 442 from further alteration by the recognition engine.”) (discussing Figure 4F). This is clear even from the portions of the specification cited by Samsung. *See id.* at 6:10-16 (stating that *while candidate sequence is in the buffer*, it is “subject to further modification” due to “additional user input”).

In other words, Samsung’s proposal injects a feature of a preferred embodiment for what can and cannot happen to a candidate sequence after it is removed from the buffer into a separate part of the invention: the sending of a candidate sequence to an application. Samsung’s proposal inevitably generates confusion about whether a user, using the application, can further edit the candidate sequence. On that point, Samsung says now that it “does not dispute editing may occur in the application itself.” But this contradicts the plain English of its construction, which would preclude any such editing by its own terms.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on January 6, 2025, I electronically filed the foregoing document with the Clerk of the Court for the Eastern District of Texas using the ECF System which will send notification to the registered participants of the ECF System as listed on the Court's Notice of Electronic Filing.

/s/ Marc A. Fenster

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